Sentiment of COVID-19 conspiracy theory and anti-vaccine endorsements–A text analysis of book reviews on Amazon Japan

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1　目的

Recent studies find that e-commerce platforms are an overlooked yet main source of health misinformation (Shin & Valente, 2020). During the COVID-19 pandemic, in Japan, pseudoscience books about COVID-19 and vaccine-related conspiracy theories can often be found on the bestselling list on Amazon Japan. Some of these books have even accumulated hundreds of positive reviews. To understand why people endorse these conspiracy theories, this study examines the sentiment of the endorsements for these books using quantitative text analysis of book reviews found on Amazon Japan.

2　方法

We collected 1,303 reviews of 11 popular books about COVID-19 conspiracy and anti-vaccine from Amazon Japan. First, we examined the embedded sentiment of the reviews using the 'semantic orientation of words' sentiment dictionary for the Japanese language by Takamura (2005). Second, we identified the themes of the reviews using topic model analysis. The data were collected using Python and the analyses were conducted using R and Quanteda package.

3　結果

Overall, the number of highly-rated (3~5 stars) reviews (n=1,302) was significantly higher than that of the poorly-rated (1~2 stars) ones (n=233). Preliminary results of the sentiment analysis show that the sentiment of the highly-rated reviews was overwhelmingly negative with an average of 2.92 positive words and 52.95 negative words in each review. Initial results of the topic model analysis also show that the reviews were filled with negative words such as 死, 病気, 感染, 陰謀, and 罹患.

4　結論

In summary, we found that the sentiment of the endorsements for these COVID-19-related conspiracy and anti-vaccine books was mostly negative. This finding is in line with conspiracy theory literature, which suggests that conspiracy theory endorsements are closely associated with negative emotions. Moving forward, our next step is to perform close reading to further understand the context of the endorsements.

【主要参考文献】

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